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29175 . 7590 07/07/2004			EXAMINER		
•	& LLOYD, LLC	SPOONER, FAMONT M			
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary		Applicat	Application No. Applicant(s)					
		09/530,2	200	ASANO ET AL.				
		Examine	er	Art Unit				
		Lamont I	M Spooner	2654				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply								
THE - External after - If the - If NC - Failu Any I	ORTENED STATUTORY PERIOD F MAILING DATE OF THIS COMMUN nsions of time may be available under the provisions SIX (6) MONTHS from the mailing date of this com period for reply specified above is less than thirty (3 period for reply is specified above, the maximum st re to reply within the set or extended period for reply reply received by the Office later than three months and patent term adjustment. See 37 CFR 1.704(b).	ICATION. of 37 CFR 1.136(a). In no enunication. io) days, a reply within the statutory period will apply and will, by statute, cause the ag	event, however, may a reply be tire atutory minimum of thirty (30) day will expire SIX (6) MONTHS from oplication to become ABANDONE	nely filed /s will be considered timel the mailing date of this co	y. ommunication.			
Status								
1) 又	Responsive to communication(s) file	ed on 15 May 0200.						
-		2b)⊠ This action is	non-final.					
3)□								
Dispositi	on of Claims							
5)□ 6)⊠ 7)⊠	4) Claim(s) 1-33 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-33 is/are rejected. 7) Claim(s) 1,2 and 24 is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.							
Applicati	on Papers							
10)⊠	The specification is objected to by the The drawing(s) filed on 15 May 2000 Applicant may not request that any objected to Replacement drawing sheet(s) including The oath or declaration is objected to	is/are: a) accept ction to the drawing(s) the correction is requ	be held in abeyance. Se ired if the drawing(s) is ob	e 37 CFR 1.85(a). jected to. See 37 Cl	• •			
Priority u	ınder 35 U.S.C. § 119							
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 								
Attachmen	t(s)							
2) Notice	te of References Cited (PTO-892) te of Draftsperson's Patent Drawing Review (Fraction Disclosure Statement(s) (PTO-1449 or No(s)/Mail Date 10.		4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal F 6) Other:	ate	O-152)			

Art Unit: 2654

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

- 2. The disclosure and claims are objected to because the term "voice recognition" is misused for what nowadays is called --speech recognition-- in the speech signal processing art. While "voice recognition" and "speech recognition" were both once used interchangeably to refer to spoken word recognition, nowadays these two terms are distinguished. The term "voice recognition" now denotes identification of who is doing the speaking (class 704/246), while "speech recognition" (or "word recognition") denotes identification of what is being said (class 704/251).
- Page 28 line 2, "abocve" should be --above--.
 Page 30 line 17, after "frequency" add --to--.
- 4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 1, 2 and 24 are objected to because of the following informalities:

Claim 1, p. 48 line 3, "meas" is interpreted as --means--.

Claim 2, p. 48 line 2, after "means" insert --is--.

Claim 24, p.53 line 1, "claim23" should be --claim 23--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35
U.S.C. 102 that form the basis for the rejections under this section made in this
Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 7. Claims 1-3, 5, 6, 10, 17-20, 27, 28, 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Ibuki et al. (JP Patent No. 04-153878 May 27, 1992).

As per **claims 1 and 27**, Ibuki et al. discloses an apparatus comprising: input means for inputting natural language (p. 5 line 18);

converting means for converting the natural language inputted by the input means (p. 6 lines 2-5);

confirmation means for confirming the natural language converted by the converting means (p.6 lines 14-17);

Art Unit: 2654

processing means for implementing processing to the natural language confirmed by the confirmation means (p.6.lines 23, 24-the processing conducted is interpreted as being performed on the confirmed results); and

output means for outputting the natural language processed by the processing means (p.6.lines 20, 21).

As per **claims 2 and 28**, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 2 depends. Ibuki et al. further discloses:

the converting means is for converting a representation into at least another representation within the same language (p.6.lines 1-5).

As per **claim 3**, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 3 depends. Ibuki et al. further discloses:

accuracy of processing at the processing means is guaranteed (p.6.lines 1-6-correct translation and succinct/accurate or precise structure is interpreted as guaranteed).

As per **claim 5**, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 5 depends. Ibuki et al. further discloses:

first language is inputted to the input means (p.5.line 18), the processing means translates the first language into second language, and the output means outputs the second language translated by the processing means (p.6.lines 24-27-processing is conducted for translation, and output for reading).

As per **claim 6**, Ibuki et al. discloses all of the limitations of claim 5, upon which claim 6 depends. Ibuki et al. further discloses:

Art Unit: 2654

the converting means converts the first language inputted by the input means into another representation of the first language (p.6.lines 2-5).

As per claim 10, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 10 depends. Ibuki et al. further discloses:

the converting means carries out conversion by at least one of merger (integration), division, deletion, replacement and exchange of order with respect to representation of natural language inputted by the input means (p.7.lines 14-17-the representation of the original input is divided).

As per **claim 17 and 31**, Ibuki et al. discloses a natural language processing apparatus comprising:

input means for inputting natural language (p.5.line 18);

one or two processing means or more for implementing processing to the natural language (p.6.lines 23, 24-the processing conducted is interpreted as being performed on the confirmed results);

one or two confirmation means or more for confirming result of processing with respect to the natural language (p.6 lines 14-17); and

output means for outputting the processed natural language (p.6.lines 12-14),

wherein second processing means for converting natural language inputted to the inputting means into for which can process it with good accuracy (p.6.lines 18-20) and second confirmation means for confirming result of the second processing means (p.6.line 21) are provided at the preceding stage of the first processing means (p.6.lines 18-21-the negative confirmation if provided,

preceding the positive confirmation and acceptance of the first processing means) to thereby carry out execution in advance of confirmation to omit confirmation of result of the first processing means (p.6.lines 20, 21-the acceptance of the second processing means are now interpreted as the output).

As per **claim 18**, Ibuki et al. discloses all of the limitations of claim 17, upon which claim 18 depends. Ibuki et al. further discloses:

processing by the first processing means is machine translation processing, kana-kanji conversion processing, information retrieval processing by natural language, or representation conversion processing by natural language (p.6.lines 12-14-representation conversion processing).

As per **claim 19**, Ibuki et al. discloses all of the limitations of claim 17, upon which claim 19 depends. Ibuki et al. further discloses:

processing by the second processing means is machine translation processing, kana-kanji conversion processing, information retrieval processing by natural language, or representation conversion processing by natural language (p.6.lines 18, 19-the transmission of "other analytical results is interpreted as information retrieval processing).

As per **claim 20 and 32**, Ibuki et al. discloses all of the limitations of claim 17, upon which claim 20 depends. Ibuki et al. further discloses:

at the preceding stage of the second processing means, third processing means and third confirmation means for confirming result thereof (p.6.line 18-20-in the negative confirmation means-processing is repeated continuously, interpreted as the third confirmation means), whereby the third confirmation

Art Unit: 2654

means is moved to the portion after the second processing means or processing means of the stage succeeding thereto, or the third confirmation means is merged or integrated into the second confirmation means or confirmation means of the stage succeeding thereto (p.6.lines 20-22) to thereby carry out postponement of confirmation (positive confirmation, p.6.line 20, is postponed due to negative confirmation-rejection).

Claim Rejections - 35 USC § 103

- 8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 9. Claims 4, 11, 12 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibuki et al. in view of Rondel et al. (US Patent No. 4,984,177 Jan. 8, 1991).

Ibuki et al. and Rondel et al. are analogous art in that they both involve language translation.

As per **claim 4**, Ibuki et al discloses all of the limitations of claim 2, upon which claim 4 depends. Ibuki et al. does not explicitly disclose:

the processing means carries out processing by template.

However, Rondel et al. teaches having a processing means which carries out processing by template (C.13.lines 20-27-the process is language translation). Therefore, at the time of the invention, it would have been obvious to

Art Unit: 2654

one ordinarily skilled in the art to combine Ibuki et al. with Rondel et al. The motivation for doing so would have been to provide an efficient and clearer way of representation for translation by using a previously established sentence patterns, which provides an efficient manner for comparison and matching (Rondel et al. C.13.lines 25-28).

As per **claim 11**, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 11 depends. Ibuki et al. does not disclose:`

the input means inputs natural language by voice.

However, Rondel et al. teaches inputting by voice (C.9.lines 39 and 40). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Rondel et al. The motivation for doing so would have been to have benefit of inputting by speech into the apparatus.

As per **claim 12**, Ibuki et al. discloses all of the limitations of claim 11, upon which claim 12 depends. Ibuki et al. further discloses:

the confirmation means confirms, only once, natural language inputted (p.6.lines 20, 21).

Ibuki et al. does not disclose:

the confirmation means confirms, only once, natural language inputted by voice to the input means.

However, Rondel et al. teaches confirming only once, voice input (C.9.lines 54-56). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Rondel et

Art Unit: 2654

al. The motivation for doing so would have been to eliminate a redundancy of confirmation once the confirmation criteria had been achieved, and minimize memory storage space (Rondel C.9.lines 50-53).

As per **claim 22**, Ibuki et al. discloses all of the limitations of claim 20, upon which claim 22 depends. Ibuki et al. further discloses:

the first processing means carries out machine translation (p.6.lines 23-27).

Ibuki et al. does not disclose:

the third processing means carries out speech recognition.

However, Rondel et al. teaches having speech (C.9.lines 39-42) for input and speech recognition. Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Rondel et al. The motivation for doing so would have been to have a processing means to process the method of input for speech.

As per claim 23, Ibuki et al. discloses all of the limitations of claim 20, upon which claim 23 depends. Ibuki et al. further discloses:

representation conversion processing means for converting representation and representation conversion confirming means for confirming result of the conversion thereof are supplemented at the preceding stage of the machine translation processing means to thereby carry out execution in advance of processing by the translation result confirmation means (p.6.lines 12-27-the representation conversion and confirmation is performed prior to machine translation-which omits the translation result confirming means, due to the

Art Unit: 2654

translation result confirming means being in succession to the representation conversion and confirming means) to omit the translation result confirming means of the stage succeeding to the machine translation processing means.

Ibuki et al does not disclose:

speech recognition processing means for carrying out speech recognition of natural language inputted to the input means, recognition result confirmation means for confirming recognition result at the speech recognition processing means, machine translation means for implementing machine translation to the result confirmed at the recognition result confirmation means, and translation result confirmation means for confirming translation result at the machine translation means.

However, Rondel et al. teaches recognizing speech and confirming the recognition result (C.9.lines 39-50), and machine translation of the confirmed results (C.14.lines 42-47). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Rondel et al. The motivation for doing so would have been to utilize speech recognition for input by confirmation, and confirming the conversion representation prior to machine translation, which would benefit by not translating and processing machine translation to unconfirmed speech representation of information (Rondel et al. p.9.lines 49, 50, 54, 55).

As per claim 24, Ibuki et al and Rondel et al. disclose all of the limitations of claim 23, upon which claim 24 depends. Ibuki et al. further discloses:

the representation conversion result confirming means (p.6.lines 12-14)

Art Unit: 2654

Ibuki et al. does not disclose:

postponement of processing by the recognition result confirming means which merges or integrates the recognition result confirmation result with the representation conversion result confirming means existing at the stage succeeding thereto is carried out.

However, Rondel teaches postponement of processing by the recognition result confirming means (C.9.lines 49-53, C.14.lines 42-47-the translation is postponed until the recognition criteria is met). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Rondel et al. The motivation for doing so would have been to utilize speech as input, which would be integrated into the apparatus as additional input and thereby merged with the apparatus that performs the representation conversion of the input, which would be supply the matching criteria of desired items to be translated (Rondel p.9.lines 54-57), which would postpone speech recognition results until the desired information to be translated is achieved (Rondel C.9.lines 49-55).

10. Claims 8, 9, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibuki et al. in view of Kuo (US Patent No. 5,285,386 Feb. 8, 1994)

Ibuki et al and Kuo are analogous art in that they both involve language translation.

As per claim 8, Ibuki et al discloses all of the limitations of claim 1, upon which claim 8 depends. Ibuki et al. does not explicitly disclose:

Art Unit: 2654

the converting means converts plural representations into single representation with respect to representation of natural language inputted by the input means.

However, Kuo teaches taking plural representation of a word (C.5.lines 1, 2) and converting them into a singe representation with respect to representation of natural language (C.5.lines 2-10-a dominant code-interpreted as the source language representation, is identified from multiple related/representative semantic codes). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Kuo. The motivation for doing so would have been to disambiguate multiple (ambiguous) representations with respect to input text, by the conversion unit (Kuo C.5.lines 11-15).

As per **claim 9**, Ibuki et al discloses all of the limitations of claim 1, upon which claim 9 depends. Ibuki et al. does not explicitly disclose:

the converting means converts polysemous representation into plural univocal representations with respect to representation of natural language inputted by the input means.

However, Kuo teaches converting polysemous representations (C.5.lines 1, 2-semantic codes are interpreted as polysemous representation) into plural univocal representations (dominated code is interpreted as the univocal representations C.3.lines 63-67,) with respect to representation of natural language (C.5.lines 5-7-revolving around the source natural language).

Therefore, at the time of the invention, it would have been obvious to one

ordinarily skilled in the art to combine Ibuki et al. with Kuo. The motivation for doing so would have been to disambiguate ambiguous/polysemous representation with respect to input text, by the conversion unit (Kuo C.5.lines 11-15).

As per claim 13, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 13 depends. Ibuki et al. does not disclose:

the input means inputs natural language character by character.

However, Kuo teaches inputting by keyboard (C.6.lines 6, 7-which is interpreted as character by character). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Kuo. The motivation for doing so would have been to have benefit using a keyboard for inputting text into the apparatus.

As per **claim 14**, Ibuki et al. discloses all of the limitations of claim 13, upon which claim 14 depends. Ibuki et al. further discloses:

the confirmation means confirms, only once, natural language inputted (p.6.lines 20, 21).

Ibuki et al. does not disclose:

the confirmation means confirms, only once, natural language inputted by character at the input means.

However, Kuo teaches inputting by keyboard (C.6.lines 6, 7-which is interpreted as character by character). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Kuo. The motivation for doing so would have been to have benefit using a

Art Unit: 2654

keyboard for inputting text into the apparatus, for confirming without a redundant confirmation process, confirmed input.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over lbuki et al. in view of Tillman et al. (US Patent No. 6,182,026 filed Jun. 26, 1998)

Ibuki et al. and Tillman et al. are analogous art in that they both involve language translation.

As per **claim 21**, Ibuki et al. discloses all of the limitations of claim 20, upon which claim 21 depends. Ibuki et al. further discloses:

the second confirmation and the third confirmation means are merged or integrated gives result of processing as a value (p.6.lines 18-20-rejection confirmation is merged with the acceptance confirmation, p.7.lines 25, 26-assigning evaluation/confirmation value).

Ibuki et al. does not disclose:

the second confirmation and the third confirmation means are merged or integrated gives result of processing as numeric value to present the numeric value.

However, Tillman et al. teaches assigning a numerical value to words to evaluate confirmation value for presentation (C.3.lines 5-10). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. and Tillman et al. The motivation for doing so would have been to have a numerical value as the evaluated value for the benefit of determining a proper structure for confirmation, and defining a direct numerical correspondence between integrated confirmations (Tillman et al. 7-9, 48-51).

12. Claims 7,15, 16, 25, 26, 29, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibuki et al. in view of Yamahata et al. (JP 03-282776 Dec. 12, 1991).

Ibuki et al. and Yamahata et al. are analogous art in that they are both of the language translation field.

As per claim 7, Ibuki et al. discloses all of the limitations of claim 5, upon which claim 7 depends. Ibuki et al. does not disclose:

the converting means converts the first language inputted by the input means into third language.

However, Yamahata et al. teaches converting the first language into a third language (page 2 lines 19, 20, page 3 lines 1-2). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Yamahata et al. The motivation for doing so would have been to rewrite the first language in a form that is clearer (third language) according to machine translation (Yamahata et al. p.4.lines 19-20-p.5.lines 1-3), by viewing the results of the reverse translation for evaluation (Yamahata et al. page 3 lines 3 and 4).

As per claims 15 and 29, Ibuki et al. discloses all of the limitations of claim 1, upon which claim 15 depends. Ibuki et al. further discloses:

first language is inputted to the input means, the converting means converts first language inputted to the input means into second representation of second language;

Ibuki et al. does not disclose:

Art Unit: 2654

the second representation of second language and converts it into first representation of the first language having one-to-one correspondence with respect to the second representation, and the confirmation means carries out confirmation by using the first representation.

However, Yamahata et al. teaches having the second language converted into a first representation of the first language having one-to-one (page 3 lines 16 and 17) correspondence with respect to the second representation (page 2 lines 19 and 20, page 3 lines 1 and 2), and the confirmation means carries out confirmation by using the first representation (page 4 lines 13-16). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Yamahata et al. The motivation for doing so would have been to rewrite the second language in a form that is clearer (third language) according to machine translation (Yamahata et al. p.4.lines 19-20-p.5.lines 1-3), for confirmation by having the translation in a further form of a language comprehensible to the user (page 2 lines 13-16).

As per claims 16 and 30, Ibuki et al. and Yamahata et al. disclose all of the limitations of claim 15, upon which claim 16 depends. Ibuki et al. further discloses:

the processing means translates the first language into the second language on the basis of conversion at the converting means (p.6 lines 14-25) and confirmation at the confirmation means (p.6.lines 14-17), and the output means outputs the second language translated by the processing means (p.6.lines 24-27).

Art Unit: 2654

As per claims 25 and 33, Ibuki et al discloses a natural language apparatus comprising:

input means for inputting natural language (p.5.line 18);

converting means for converting first language inputted to the input means into representation having one-to-one (p.7.lines 21, 22) correspondence with respect to representation of second language by representation by the second language (p.6.lines 1-5)

processing means for implementing processing to the natural language inputted at the input means in accordance with result of the confirmation at the confirmation means (p.6.lines 23-27); and

output means for outputting natural language to which the processing has been implemented at the processing means (p.6.lines 20, 21).

Ibuki et al. does not disclose:

converting means for converting first language inputted to the input means into representation having one-to one correspondence with respect to representation of second language by representation by the second language and representation by third representation;

confirmation means for confirming representation of the third language converted at the converting means;

However, Yamahata et al. teaches having a representation by a third language (p.2.lines 19, 20, p.3.lines 1, 2), and confirmation means for representing the third language (p.4.lines 13-16). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to

Art Unit: 2654

combine Ibuki et al. with Yamahata et al. The motivation for doing so would have been to determine the true meaning of the first language representation, second language representation or third language representation, by confirmation of the representations, which would disambiguate the translation to lower the cost (produce a desired translation) of the final translation produced by the translation machine (Yamahata et al. p.2.lines 8-17), with a system that supported quality of output sentences, as well as comprehensible input.

As per claim 26, Ibuki et al. and Yamahata et al. disclose all of the limitations of claim 25, upon which claim 26 depends. Ibuki et al. does not disclose:

at the converting means, the second language is language to be translated, and representation by the third language is obtained by conversion of representation by the first language.

However, Yamahata et al. teaches the second language is to be translated, and representation by the third language is obtained by conversion of representation by the first language (p.3.lines 10-19-a is the first language, b is the second language, c is the third language-the third representation is obtained by first representation). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Ibuki et al. with Yamahata et al. The motivation for doing so would have been to rewrite the second language in a form that is clearer (third language) according to machine translation (Yamahata et al. p.4.lines 19-20-p.5.lines 1-3).

Art Unit: 2654

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M Spooner whose telephone number is 703/305-8661. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Vo can be reached on 703/308-6728. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lms 06/10/2004

> NGUYENT.VO PRIMARY EXAMINER